

**Docket No.:** CHA920030010US1  
(IBMC-0351)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<b>Applicant:</b>	Doganata et al.	<b>Conf. No.:</b>	4523
<b>Serial No.:</b>	10/664,450	<b>Art Unit:</b>	2168
<b>Filed:</b>	09/20/2003	<b>Examiner:</b>	Dwivedi, Mahesh H.

**Title: METHOD OF SELF ENHANCEMENT OF SEARCH RESULTS THROUGH  
ANALYSIS OF SYSTEM LOGS**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. 1.131**

We, the Applicants in the above-identified patent application, declare as follows:

1. That we are the inventors of the subject matter described and claimed in the above-identified patent application.

2. That prior to June 16, 2003, we conceived of a self-enhancing search system comprising:

a search system analysis system that periodically looks through a log of search queries of the search system and identifies, for analyzing, unsatisfactory customer search queries that do not bring satisfactory results from a database being searched by customers;

a search query analyzer using synonyms and optionally, one or more of glossary terms, known typographical errors and translated words to provide alternative query terms to original search query terms in the unsatisfactory customer search queries;

a relevant document finder based on enhanced queries including the alternative query terms to locate relevant documents in the searched database not found when the unsatisfactory customer search queries were used; and

embedding in located relevant documents not found by the unsuccessful search queries those of the original unsuccessful search query terms not contained in those relevant documents.

3. That prior to June 16, 2003, we conceived of a computer program on a computer useable medium for providing a self-enhancing search system comprising:

a search system analog system software module that periodically looks through a log for the search system and selects for analyzing unsuccessful customer search queries;

a search query analyzer software module using synonyms and optionally, one or more of glossary terms, known typographical errors, and translated words to provide alternative query terms to the terms using in the unsuccessful search queries;

relevant document finder software module using enhanced queries including the alternative query terms to locate relevant documents not found using said unsuccessful customer search queries; and

software for embedding search query terms of the unsuccessful queries in the documents located by the enhanced queries and not found by the unsuccessful customer search so that the documents located by the enhanced queries will be found if the unsuccessful customer search queries are repeated.

4. That prior to June 16, 2003, we conceived of a self-enhancing search system comprising:

a search system analysis system that periodically looks through a search system log and identifies for analysis unsatisfactory customer search queries that do not cite more than a specified number of documents;

a search query analyzer using synonyms and optionally, one or more of glossary terms, synonyms, known typographical errors, and translated words to provide alternative query terms to original search query terms of the unsatisfactory customer search queries identified by the search system analysis system;

a relevant document finder based on enhanced queries including the alternative query terms to locate relevant documents not found by the original unsatisfactory customer search queries identified by the search system analysis system; and

a meta-data enhancer creating separate enhanced links to one or more of said relevant documents linking to said relevant documents the original terms of the unsatisfactory search queries and not found in the relevant documents so that future search queries using the original terms will result in finding said relevant documents not found by the unsatisfactory customer search queries.

5. That the present invention is described in a Disclosure of Invention (Exhibit "A") submitted to the IBM Corporation Patent Department prior to June 16, 2003. Specifically, Pages 1-2, outline point 2. *How does the invention solve the problem or achieve an advantage.* The dates have been redacted.

6. That, subsequent to the conception of the invention, and up until the patent application filing date of September 20, 2003, we diligently and actively assisted the IBM Corporation Patent Department in the planning, preparation, review, and filing of the above-identified patent application.

Declarants further state that the above statements were made with the knowledge that willful false statements and the like are punishable by fine and/or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any such willful false statement may jeopardize the validity of this application or any patent resulting therefrom.

Date: 11/20/10

  
Yurdaer Nezih Doganata

Date:

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Youseff Drissi

Date:

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Tong -Haing Fin

Date:

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Lev Kozakov

Date:

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Moon Ju Kim

Date:

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Juan Leon Rodriguez

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Date:

Yurdaer Nezihi Doganata

Date:

Nov 22, 2016

Youseff Drissi

Date:

Tong -Haing Fin

Date:

Lev Kozakov

Date:

Moon Ju Kim

Date:

Juan Leon Rodriguez

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Date:

Yurdaer Nezihi Doganata

Date:

Youseff Drissi

Date:

11 / 22 / 2010

Tong -Haing Fin

Date:

Lev Kozakov

Date:

Moon Ju Kim

Date:

Juan Leon Rodríguez

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Yurdaer Nezih Doganata

Date:

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Youseff Drissi

Date:

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Tong -Haing Fin

Date:

Nov 24, 2010

  
\_\_\_\_\_  
Lev Kozakov

Date:

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Moon Ju Kim

Date:

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Juan Leon Rodriguez

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Date:

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Yurdaer Nezihi Doganata

Date:

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Youseff Drissi

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Date:

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Lev Kozakov

Date:

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Moon Ju Kim

Date:

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Juan Leon Rodriguez



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Date:

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Youseff Drissi

Date:

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Tong -Haing Fin

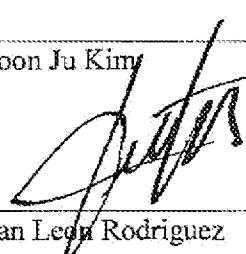
Date:

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Lev Kozakov

Date:

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Moon Ju Kim

Date:

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Juan Leon Rodriguez